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(54) Title: **COATING OF A POLYMER LAYER USING LOW POWDER PULSED PLASMA IN A PLASMA CHAMBER OF A LARGE VOLUME**

(57) Abstract: A method for depositing a polymeric material onto a substrate, said method comprising introducing an organic monomeric material in a gaseous state into a plasma deposition chamber, igniting a glow discharge within said chamber, and applying a high frequency voltage as a pulsed field, at a power of from 0.001 to 500w/m² for a sufficient period of time to allow a polymeric layer to form on the surface of the substrate. The method is particularly suitable for producing oil and water repellent coatings, in particular where the monomeric material contains haloalkyl compounds. Apparatus particularly adapted to carry out the method of the invention is also described and claimed.

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